UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

July 9, 2015

Mike Medieros
Manager, Renewable Energy Development
Pacific Gas and Electric Company
245 Market Street, Room 1309
San Francisco, CA 94105

Re: **Underground Injection Control (UIC) Permit**
Class V Experimental Well, R9UIC-CAS5-FY13-1
Pacific Gas and Electric Company (PG&E)
Review of May 2015 Monthly Report and
May 1-3, 2015 Fall-off Test, dated June 2, 2015

Dear Mr. Medieros:

This letter is to notify you that the EPA has completed its review of the subject documents. Our comments are included in the Enclosure. Please provide a response as requested.

Please contact Michele Dermer at (415) 972-3417 if you have any questions.

Sincerely,

for David Albright
Manager
Drinking Water Protection Section

Enclosure

cc: Mike Woods, CA DOGGR, District 4
Scott Armstrong, Regional Water Quality Control Board, Central Valley Region

COMMENTS ON PG&E MAY 3, 2015 FALL-OFF TEST IN THE CAES KING ISLAND

1. The original static reservoir pressure in the Mokelumne River Formation reservoir was 2,050 pounds per square inch absolute (psia) at 4,671 feet true vertical depth (TVD), based on a pressure gradient of 0.439 psi/foot measured in the Moresco et al Unit A-1 discovery well. This FOT indicates a static pressure of 2,132 psia on May 3, 2015 after a cumulative injected air volume of 484 million standard cubic feet (MMscf), or 82 psi above the original static reservoir pressure, which is compatible with model predictions of pressure behavior at that point in the CAES test. *In accordance with the Monitoring Program in Appendix P of the permit, the reservoir pressure in the I/W Test Well 1 and the wellhead and calculated bottomhole pressure in the Piacentine 1-27 observation well should be monitored daily during the post-test monitoring period to ensure that it dissipates and remains at a level below the original static reservoir pressure of 2,050 psia as predicted in the simulations. PG&E may have proposed an alternative to this monitoring requirement, however no final proposal was received. Please confirm this requirement will be met.*
2. In summary, the May 1st-3rd FOT analysis supports the permeability inputs and static reservoir pressure predictions in the reservoir model.

COMMENTS ON THE MAY 2015 MONTHLY REPORT FOR THE PG&E TEST INJECTION/WITHDRAWAL WELL 1

1. The permit requires continuous monitoring and recording of tubing and annulus pressures and temperatures in the Piacentine 1-27 well and those data are presented in Attachment 2 of the May Monthly Report. However, the Evaluation of Pressure Monitoring Data from the Piacentine 1-27 Observation Well, presented in Attachment 4 and discussed on the second page of the PG&E transmittal letter in the March Monthly Report, was omitted in the April and May monthly reports. *PG&E should provide the plot of reservoir pressure versus cumulative net injection volumes and the tables labeled as Attachment 4a and 4b in Attachment 4, or explain why the plot and tables were omitted. Also, a discussion of the comparison of the actual to the predicted bottomhole pressures should be added to page 2 of the transmittal letter, similar to the discussion in the March Monthly Report.*

2. The footnotes to the daily monitoring data table and hourly monitoring data table in Attachment 2 indicate that a TDML log and temperature log were run in the Piacentine 1-27 well in April. Also, footnote 2 to Attachment 2a, the hourly monitoring data table, indicates that a BHP survey was run in this well. *PG&E should provide copies of the logs and BHP survey report to EPA.*